Aircraft Manufacturer British Aerospace

Aircraft Engine Manufacturer Avco Lycoming (ALF 502R-5)

No. of Engines 4 Engine Rating 6,970 lb

Min. T/O Wt. 56.5 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 93.0 k-lb Max. T/O Wt. War-Time 93.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,950 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 75.5 k-lb Max. Ldg. Wt. 81.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. †

* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,620 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-462. British Aerospace 146-Model 200

Aircraft Manufacturer British Aerospace

Aircraft Engine Manufacturer Avco Lycoming (ALF 502R-5)

No. of Engines 4 Engine Rating 6,970 lb

Min. T/O Wt. 60.1 k-lb * Min. T/O Dist. @ Min. T/O Wt. †

* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 93.0 k-lb Max. T/O Wt. War-Time 93.0 k-lb

* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,950 ft

* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 77.5 k-lb Max. Ldg. Wt. 83.0 k-lb

* Min. Ldg. Dist. @ Min. Ldg. Wt. †

* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,030 ft

* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-463. British Aerospace 146-Model 300

Aircraft Manufacturer Aerospatiale (formerly manufactured by Sud-Aviation)

Aircraft Engine Manufacturer Turbomeca (Artouste IIIB)

No. of Engines 1 Engine Rating 870 SHP

Minimum Take-Off Weight 2.70 k-lb

Maximum Take-Off Weight Peace-Time 4.30 k-lb

Maximum Take-Off Weight War-Time 5.07 k-lb (With slung load)

Maximum Landing Weight 4.30 k-lb

Hover Ceiling (In Ground Effect) 9,675 ft (At 4.3 k-lb)

Hover Ceiling (Out of Ground Effect) 5,085 ft (At 4.3 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-464. Aerospatiale 315B, Lama

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Turmo IVC)

No. of Engines 2 Engine Rating 1575 SHP

Minimum Take-Off Weight 9.39 k-lb

Maximum Take-Off Weight Peace-Time 16.3 k-lb

Maximum Take-Off Weight War-Time 16.3 k-lb

Maximum Landing Weight 16.3 k-lb

Hover Ceiling (In Ground Effect) 7,545 ft

Hover Ceiling (Out of Ground Effect) 5,575 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-465. Aerospatiale 330J, Puma

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Makila IA)

No. of Engines 2 Engine Rating 1780 SHP

Minimum Take-Off Weight 10.7 k-lb

Maximum Take-Off Weight Peace-Time 18.4 k-lb

Maximum Take-Off Weight War-Time 20.6 k-lb
(With slung load)

Maximum Landing Weight 18.4 k-lb

Hover Ceiling (In Ground Effect) 8,900 ft
(At 18.4 k-lb)

Hover Ceiling (Out of Ground Effect) 6,890 ft
(At 18.4 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
11	3	3	3	3	3	3	3	3
18	5	5	5	5	5	5	5	6
21	6	6	6	6	6	6	6	7

Figure A-466. Aerospatiale 332C, Super Puma

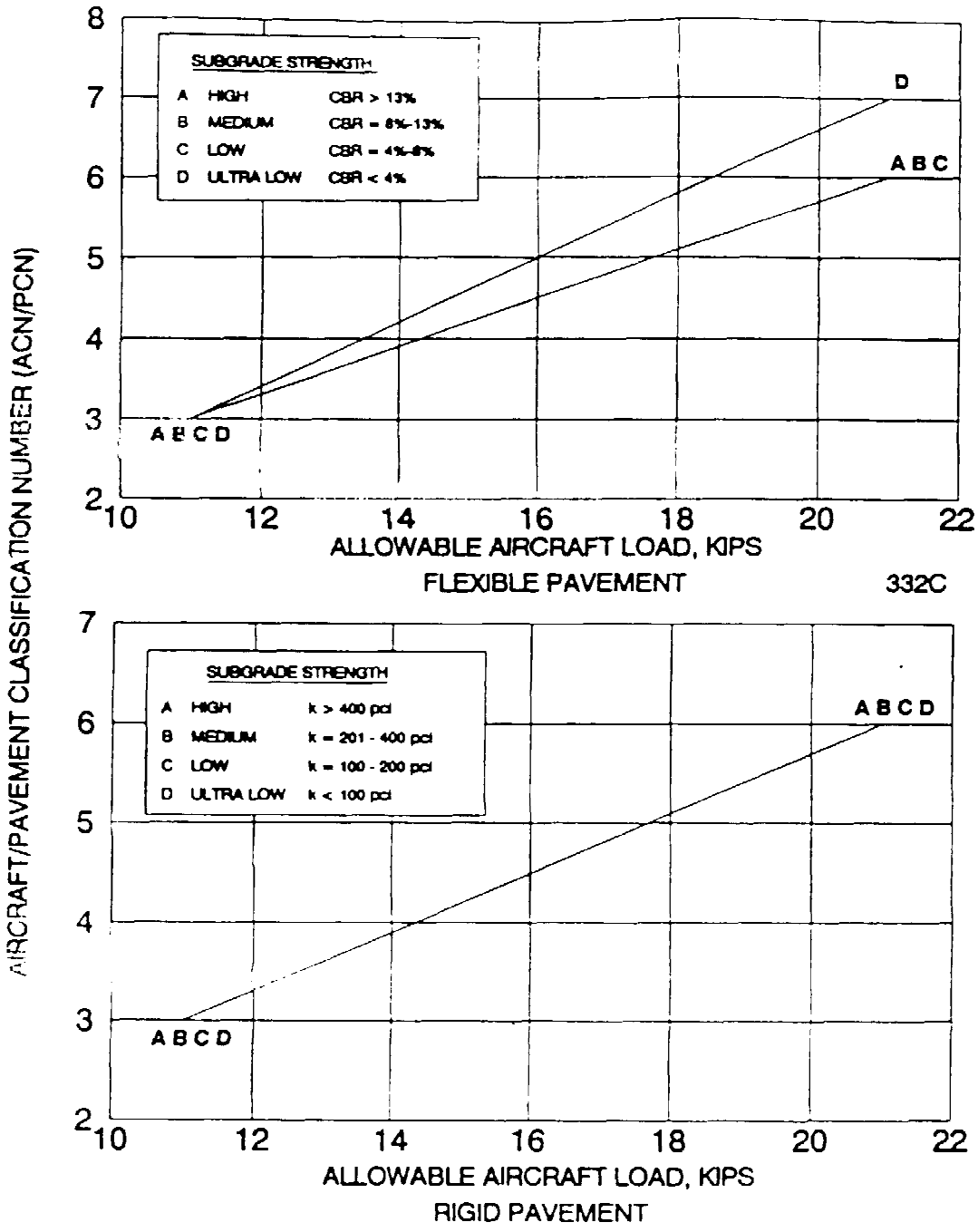

Figure A-467. Aerospatiale 332C, ACN/PCN Curves

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Makila IA)

No. of Engines 2 Engine Rating 1780 SHP

Minimum Take-Off Weight 11.2 k-lb

Maximum Take-Off Weight Peace-Time 18.4 k-lb

Maximum Take-Off Weight War-Time 20.6 k-lb
(With slung load)

Maximum Landing Weight 18.4 k-lb

Hover Ceiling (In Ground Effect) 8,900 ft
(At 18.4 k-lb)

Hover Ceiling (Out of Ground Effect) 6,890 ft
(At 18.4 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
11	3	3	3	3	3	3	3	3
18	5	5	5	5	5	5	5	6
21	6	6	6	6	6	6	6	7

Figure A-468. Aerospatiale 332L, Super Puma

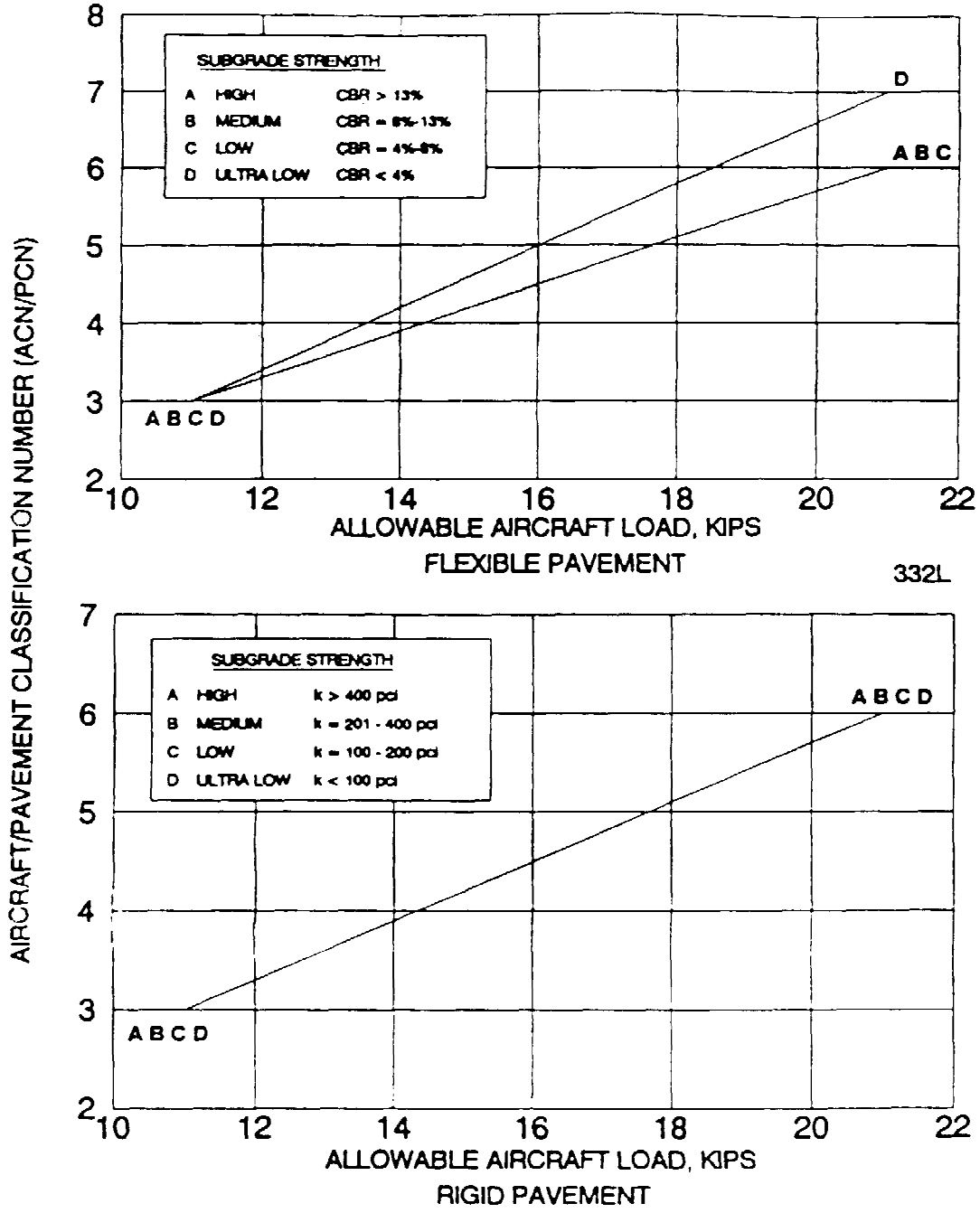

Figure A-469. Aerospatiale 332L, ACN/PCN Curves

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Astazou IIIA)

No. of Engines 1 Engine Rating 590 SHP

Minimum Take-Off Weight 2.72 k-lb

Maximum Take-Off Weight Peace-Time 3.97 k-lb

Maximum Take-Off Weight War-Time 3.97 k-lb

Maximum Landing Weight 3.97 k-lb

Hover Ceiling (In Ground Effect) 9,350 ft

Hover Ceiling (Out of Ground Effect) 6,560 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-470. Aerospatiale 341, Gazelle

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Arriel)

No. of Engines 1 Engine Rating 641 SHP

Minimum Take-Off Weight 2.95 k-lb

Maximum Take-Off Weight Peace-Time 4.3 k-lb

Maximum Take-Off Weight War-Time 4.63 k-lb
(With slung load)

Maximum Landing Weight 4.3 k-lb

Hover Ceiling (In Ground Effect) 9,675 ft
(At 4.3 k-lb)

Hover Ceiling (Out of Ground Effect) 7,380 ft
(At 4.3 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-471. Aerospatiale 350B, Astar

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Avco Lycoming (LTS 101-600A.2)

No. of Engines 1 Engine Rating 616 SHP

Minimum Take-Off Weight 2.96 k-lb

Maximum Take-Off Weight Peace-Time 4.3 k-lb

Maximum Take-Off Weight War-Time 4.63 k-lb
(With slung load)

Maximum Landing Weight 4.3 k-lb

Hover Ceiling (In Ground Effect) 8,200 ft
(At 4.3 k-lb)

Hover Ceiling (Out of Ground Effect) 5,900 ft
(At 4.3 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-472. Aerospatiale 350D, Astar

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Allison (250-C20F)

No. of Engines 2 Engine Rating 425 SHP

Minimum Take-Off Weight 3.41 k-lb

Maximum Take-Off Weight Peace-Time 4.63 k-lb

Maximum Take-Off Weight War-Time 4.63 k-lb

Maximum Landing Weight 4.63 k-lb

Hover Ceiling (In Ground Effect) 7,215 ft

Hover Ceiling (Out of Ground Effect) 4,920 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-473. Aerospatiale 355E, Twinstar

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Allison (250-C20F)

No. of Engines 2 Engine Rating 425 SHP

Minimum Take-Off Weight 3.51 k-lb

Maximum Take-Off Weight Peace-Time 5.07 k-lb

Maximum Take-Off Weight War-Time 5.51 k-lb
(With slung load)

Maximum Landing Weight 5.07 k-lb

Hover Ceiling (In Ground Effect) 6,725 ft
(At 5.07 k-lb)

Hover Ceiling (Out of Ground Effect) 7,700 ft
(At 5.07 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-474. Aerospatiale 355F, Twinstar

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Allison (250-C20F)

No. of Engines 2 Engine Rating 425 SHP

Minimum Take-Off Weight 3.54 k-lb

Maximum Take-Off Weight Peace-Time 5.29 k-lb

Maximum Take-Off Weight War-Time 5.51 k-lb
(With slung load)

Maximum Landing Weight 5.29 k-lb

Hover Ceiling (In Ground Effect) 7,700 ft
(At 5.29 k-lb)

Hover Ceiling (Out of Ground Effect) 5,475 ft
(At 5.29 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-4?5. Aerospatiale 355F1, Twinstar

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Astazou XVIIIA)

No. of Engines 1 Engine Rating 1050 SHP

Minimum Take-Off Weight 3.91 k-lb

Maximum Take-Off Weight Peace-Time 6.61 k-lb

Maximum Take-Off Weight War-Time 6.61 k-lb

Maximum Landing Weight 6.61 k-lb

Hover Ceiling (In Ground Effect) 8,000 ft

Hover Ceiling (Out of Ground Effect) 5,700 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
6,610 lb/73 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-476. Aerospatiale 360C, Dauphin

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Arriel)

No. of Engines 2 Engine Rating 680 SHP

Minimum Take-Off Weight 4.79 k-lb

Maximum Take-Off Weight Peace-Time 7.5 k-lb

Maximum Take-Off Weight War-Time 7.5 k-lb

Maximum Landing Weight 7.5 k-lb

Hover Ceiling (In Ground Effect) 11,710 ft

Hover Ceiling (Out of Ground Effect) 9,315 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
7,500 lb/73 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-477. Aerospatiale 365C, Dauphin 2

Aircraft Manufacturer Aerospatiale

Aircraft Engine Manufacturer Turbomeca (Arriel IC)

No. of Engines 2 Engine Rating 710 SHP

Minimum Take-Off Weight 5,34 k-lb

Maximum Take-Off Weight Peace-Time 8,82 k-lb

Maximum Take-Off Weight War-Time 8,82 k-lb

Maximum Landing Weight 8,82 k-lb

Hover Ceiling (In Ground Effect) 3,445 ft

Hover Ceiling (Out of Ground Effect) 3,445 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
8,820 lb/101 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-478. Aerospatiale 365N, Dauphin 2

Aircraft Manufacturer Agusta

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 2 Engine Rating 400 SHP

Minimum Take-Off Weight 3.56 k-lb

Maximum Take-Off Weight Peace-Time 5.78 k-lb

Maximum Take-Off Weight War-Time 5.78 k-lb

Maximum Landing Weight 5.78 k-lb

Hover Ceiling (In Ground Effect) 7,700 ft

Hover Ceiling (Out of Ground Effect) 6,000 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
5,780 lb/85 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-479. Agusta 109A

Aircraft Manufacturer Agusta

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 2 Engine Rating 420 SHP

Minimum Take-Off Weight 3.67 k-lb

Maximum Take-Off Weight Peace-Time 5.78 k-lb

Maximum Take-Off Weight War-Time 6.04 k-lb

Maximum Landing Weight 5.78 k-lb

Hover Ceiling (In Ground Effect) 7,700 ft (At 5.78 k-lb)

Hover Ceiling (Out of Ground Effect) 4,990 ft (At 5.78 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
6,040 lb/85 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-480. Agusta 109A MkII

Aircraft Manufacturer Bell Helicopter

Aircraft Engine Manufacturer Lycoming (TVO-435-25)

No. of Engines 1 Engine Rating 260 HP

Minimum Take-Off Weight 2.22 k-lb

Maximum Take-Off Weight Peace-Time 2.85 k-lb

Maximum Take-Off Weight War-Time 2.85 k-lb

Maximum Landing Weight 2,85 k-lb

Hover Ceiling (In Ground Effect) 18,000 ft

Hover Ceiling (Out of Ground Effect) 18,000 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-481. Bell 47G-3B (OH-13), Sioux